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Gender Difference in Preference and Prejudice for Female Body Shapes

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Abstract: Research shows that overweight individuals face prejudice, but there is no research whether that a specific body type faces more or less prejudice. In the four main female body shapes- Apple, Banana, Pear, and Hourglass, fat is distributed differently. The purpose of this study is to examine gender differences in preference, idealization, and prejudice patterns for female body types amongst undergraduates. Participants were presented with four body shapes and asked to give 1) their preference, 2) their prediction of the opposite sex's preference, and 3) their ideal body type. Then the participants selected four adjectives to attribute to each body shape from a preselected pool of negative and positive adjectives. Results from this study supported previous research on hip-to-waist ratio and body type negative and positive attribute association.

Keywords: *female body shape, gender differences, preference, prejudice, stereotype*

Research shows that individuals who are overweight are subjected to discrimination and prejudice. In response to this phenomenon, an entire subfield of social psychology and women's studies has emerged that is dedicated to examining the prejudices that the overweight face in present day society. The subfield is called "Fat Studies." Fat Studies is the study of obesity and people's attitudes towards individuals who are obese. Evidence that overweight prejudice and discrimination in fact exist can be examined in the theories of "Fat Prejudice" and "Thin Privilege." The Fat Prejudice Theory examines the hatred, discrimination, and prejudice towards individuals who are seen in society as "overweight" or "fat" (Robinson and Beacon, 1996). The Thin Privilege Theory examines the idea that "Thin" individuals will have more physical, economical, social, and educational opportunity's compared to overweight or fat individuals (Neumark-Sztainer, 1999). Fat Studies also includes the theory that there is an underlying stigma against overweight women particularly in western society and because of this stigma, these women are stereotyped and discriminated against in nontraditional forms such as in the retail industry, by doctors, and in classrooms.

Fat: A Fate Worse Than Death

Research on fat prejudice and thin privilege for women demonstrates that there is a cycle of discrimination that occurs. Fat Studies identifies

specific body shapes as "fat", and in doing so, pays special attention to society's perception of these individuals.

The beginning of the cycle of discrimination is stereotypes, i.e., common and simplistic attitude about overweight individuals. This concept was examined in a study conducted at Northwestern University, where researchers investigated automatic and controlled components of anti-fat attitudes, the relationship between these components, and the extent to which each component predicted prejudicial behavior (Bessenoff and Sherman, 2000). In the study, participants were primed with pictures of fat and thin women and then examined for automatic activation of both evaluative responses and stereotypic knowledge using lexical decision judgments on fat-stereotypical, thin-stereotypical, and stereotype-irrelevant trait words. Results showed greater automatic activation of negative evaluations to fat than thin women. Although, in general, automatic measures were found to be unrelated to self-reported anti-fat attitudes, one subcomponent of automatic evaluation was correlated with higher expressed dislike of fat persons. In addition, the automatic but not the controlled attitudinal measure predicted how far participants chose to sit from a fat woman. No prejudicial effects were observed. Implications for reducing prejudice toward fat persons were later discussed such as education and eliminating fat

stereotypes in the media. In conclusion it was recorded that individuals associate more negative images and thoughts with larger body types than slimmer body types.

The second step in the cycle of discrimination is prejudice, i.e., preconceived judgments about individuals who are overweight. This concept of fat prejudice was examined in a study done with children. Penny and Haddock (2007) acknowledged that research has shown that average-weight individuals are derogated when viewed next to overweight background individuals rather than next to average-weight background individuals. The aim of their investigation was to determine whether this *mere proximity* effect would be obtained among children and to determine how participant gender, target character gender and size, and background character size affect this finding. For the study, 89 children between 5 and 10 years old indicated whether they would like to be friends with a target character, who was either male or female and average-weight or overweight. The target was presented with four other background characters of the same gender, all of whom were either average-weight or overweight. The results showed that overall, overweight targets were liked significantly less than average-weight targets, though this effect was moderated by target gender, participants liked average-weight female targets significantly less when they were presented with overweight background characters and liked overweight female targets significantly less when they were presented with average-weight background characters. This was not the case for male targets. These findings support the mere proximity effect for female targets and demonstrate that this effect is present in children as young as five years of age. The implications were discussed with regards to obesity stigma. This study was unique in the sense that it focused on children and early signs of fat prejudice. This research is also unique in concluding that overweight females are singled out for ridicule significantly more often than overweight males.

The last step in the cycle is discrimination. If stereotypes and prejudice prove to be powerful,

they will eventually evolve to excluding overweight individuals from equal opportunities. Crandall (1994) claims that discrimination against overweight individuals' functions like symbolic racism. To test whether the notion that antipathy toward fat people is part of an "ideology of blame." An anti-fat attitudes questionnaire was developed and used, and three commonalities between anti-fat attitudes and racism were explored: (1) the association between values, beliefs, and the rejection of a stigmatized group, (2) the old-fashioned antipathy toward deviance of many sorts, and (3) the lack of self-interest in out-group antipathy. Parallels were found on all 3 dimensions. No in-group bias was shown by fat people. Fatism appears to behave much like symbolic racism, but with less of the negative social desirability of racism. This particular study concluded that first, there is an underlying fat prejudice and second, that most individuals reaction to fat individuals operates on the same register as racism.



Figure 1. Anti-fat, 2010, Graphic

Because of the cycle of discrimination theory, the strength of the correlation between anti-fat bias (Figure 1) and pro-thin privilege has been questioned. In a recent study conducted in the area of fat studies, researchers sought to explore the question of whether anti-fat attitude always equals a pro-thin attitude. This particular investigation examined whether individual differences commonly associated with greater anti-fat bias are also associated with a greater preference for thinness among people of varying levels of weight

(Carles and Musher-Eizenman, 2010). While levels of weight bias vary among individuals, it is not clear why one person possesses stronger anti-fat attitudes than another person. The sample population consisted of young adults (62% women; 84% Caucasian) who were recruited from psychology classes ($N = 308$). These young adults rated four male and female figures with approximate BMIs of 18.5, 25, 30, and 40, on measures of dislike and personality characteristics and completed measures assessing weight controllability, attitudes toward the obese, and perceptual reliance. Greater negative attitudes, weight controllability beliefs, and perceptual reliance were positively associated with greater dislike and negative personality attributes among obese/severely obese figures, but *inversely* related among low normal weight figures. It was ultimately concluded that individuals who judge others based on physical features or who view obesity as controllable evince greater weight bias and have a stronger preference for thin body types.

Although the research findings of these studies are credible and valuable to the field of Fat Studies as a whole, because the field is an emerging topic of study, the studies are not as sophisticated as they could be. One crucial aspect necessary to generate more sophisticated findings is the idea that it is not simply obesity that generates social, economic, educational, and physical disadvantages for women in general but that this discriminatory behavior might be attributed to body shape and fat distribution. To advance the field as a whole, research needs to get past the dichotomy of thin and fat and expand to body shapes.

The subject of body shape is further complicated by the idea of gender differences. For decades there have been numerous debates on whether there is a gender difference that lies within preference. Extending off of the idea of gender differences within preference, there have also been numerous debates on differences within genders prediction of the opposite genders preference versus the genders actual preference and differences within prejudice and

discrimination patterns also exist. Many studies claim that a gender difference does exist due to psychological, biological, and sociological differences amongst genders. These psychological, biological, and sociological gender differences range from sexual attraction to health and wellbeing. It has been theorized that women seek female body shapes that will generate the lowest cholesterol, diabetes, and blood pressure rates. It is theorized that men seek out female body shapes for sexual attraction purposes based off of which shapes are ideal for mating and producing children, concluding that the female shapes serve as a source of aesthetic pleasure, attraction, and fertility. Claims have also been made that preference varies across races, ethnicities, cultures, and genders simultaneously. On the adverse, many studies claim that preference and idealization depend on external forces such as socioeconomic income status, race, religion, education level, and location- not gender differences.

Most of the research done in the area of gender preference has been limited to three main disciplines: psychology, sociology, and biology. Because of the wide range of research that has been done on the subject of gender preference for the female body type, it is difficult to gather one specific universal conclusion for which female body shape each gender prefers. Many researchers believe that this is because the topic is so popular and it branches out over so many disciplines; this, however, is only part of the problem. The real problem lies within a lack of communication between the research that has been conducted on Fat Studies and Gender Preference; the two fields rarely merge.

Understanding prejudice and discrimination is one of the first steps to understanding the idea of the gender differences that lie within prejudice and discrimination patterns because there are gender differences found within discrimination patterns as well. To have a full understanding of the research of obesity studies pertaining to females, the gender preference of the female body type, more specifically refine the simplistic subject of obesity to the narrow focus of body

shape needs to be incorporated. Female body shape is the collective product of a woman's skeletal build and the distribution of fat and muscle throughout the body. The biggest miscommunication in fat studies is determining what is considered as fat. Because women distribute weight differently, a woman can have a certain BMI (Body Mass Index) that makes them overweight or obese; however, fat and muscle can be distributed throughout the body differently, giving them a different body shape, and thus causing others to perceive them differently.

This project examines the gender differences as males and females evaluate female body shapes differently in terms of preference, idealization, assumed opposite sex's preference, and attribute association patterns for the female body shapes. This research also analyzes the negative and positive attitudes associated with each of the female body types in hopes of shedding light on which specific body types are more or less likely to experience prejudice and eventually discrimination. This research seeks to eventually bridge the gap that lies within the lack of communication between the two fields of Fat Studies and Gender Preference.

The research is unique and valuable to the fields of Fat Studies and Gender Preference because it is a revamped experiment with methods which include actual photographs of women. With these updated research methods, a more accurate conclusion of gender differences and preference for the female body type can be drawn.

LITERATURE REVIEW

Forbidden Fruits: Shaping Women

The female body shape appears in a range of shapes, generally made up of a woman's hip, waist, and bust size. Most scientists recognize four different body types for females: *Apple*, the *Banana*, the *Pear*, and the *Hourglass* (Figure 2). According to Newcomb and Istook (2004) the body types are configured as following:

1) The *Apple* shape, which is where women have broad shoulders compared to their narrow hips. Apple shaped women tend to

have slim legs/thighs, while the abdomen and chest look out of proportion compared to the rest of the body. Fat is mainly distributed in the abdomen, chest, and face.

2) The *Banana* or *Ruler* shape, which is where the waist measurement is less than 9 inches smaller than the hip or bust measurement. Body fat is distributed predominantly in the abdomen, buttocks, chest, and face. This overall fat distribution creates the typical ruler or straight shape.

3) The *Pear* or *Spoon* shape, which is where the hip measurement is greater than the bust measurement. The distribution of fat varies, with fat tending to deposit first in the buttocks, hips, and thighs. As body fat percentage increases, the proportion of body fat distributed around the waist and upper abdomen increases. The women of this body type tend to have a relatively larger rear, robust thighs, and smaller breasts.

4) The *Hourglass* shape, which is where the hips and bust are almost of equal size with a narrow waist. Body fat distribution tends to be around both the upper body and lower body. This body type enlarges the arms, chest, hips, and rear before other parts, such as the waist and upper abdomen.

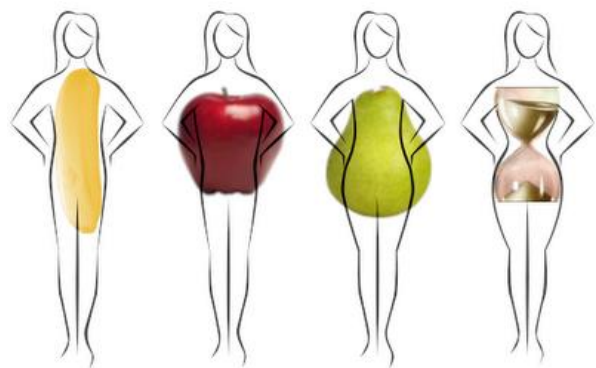


Figure 2. Female Body Shape Wear (2011)

An alternative practice for scientists is to classify the female body types as Ectomorphs, Mesomorphs, and Endomorphs. Spillman and Everlington (1989) define the three as follows.

Mesomorphs are generally characterized as individuals with sporty and athletic builds, healthy and muscular appearance, good physical attributes, broad shoulders, visible defined muscle-packs, and good stature. Ectomorphs are characterized as individuals with long and thin muscles/limbs and low fat storage, usually referred to as slim. Ectomorphs are not predisposed to store fat or build muscle. Endomorphs are characterized by increased fat storage, a wide waist and a large bone structure, usually referred to as fat. Endomorphs are predisposed to storing fat.

It is crucial to understand the reality and frequency of these female body shapes. In a study conducted at the University of North Carolina in 2004, it was found that 46% of women were banana (rectangular), just over 20% were pear, just under 14% were apple, and only 8% were considered to be hourglass (Thompson, 1995). Another study found “that the average woman’s waistline had expanded by six inches since the 1950s” and that today women are taller and have bigger busts and hips than those of the 1950s (Cusumano and Thompson, 1995).

Research shows that males and females do in fact have different preferences and idealizations when it comes to the female body type; however, the exact female body type that is preferred and idealized varies through discipline and methods. Research on preferred and ideal female body type has been conducted by biologists, psychologist, sociologists, anthropologists, feminists, and historians. All of these fields have produced a wide range of theories and results in attempts to answer the question.

The Naked Truth: What Men Really Want



Figure 3. *Attract great men (2011)*

To examine which of the female body shapes each gender prefers, researchers have examined the body shapes in terms of hip-to-waist ratio. One of the pioneers of examining gender difference and preference for the female body type, in terms of hip-to-waist ratio is psychologist Devendra Singh (1994). Waist-to-hip-ratio or WHR is the measurement of the ratio of the circumference for the waist to that of the hips (Singh and Young, 1994). For his data collecting methods, he showed pencil sketch drawings of women to individuals from various cultures to find what hip-to-waist-ratios they prefer in women. Singh discovered that men rated women with low WHR (0.7) as optimally attractive, noting that lower levels of WHR correlated to lower risk of disease and greater fertility. Subsequent research demonstrated the cross-cultural and cross-temporal appeal of a low WHR. Singh concluded that men prefer a body shape more similar to that of the Pear or Hourglass shape.

In another study (Barnett, Keel, Conoscenti, 2001), which tested for ethnic differences for preferred female body type, similar results were found. In this particular study, college students ($N = 466$) from a prestigious New England university indicated their current and ideal figures. For women, the ideal was thinner than their current figure regardless of actual size, producing a discrepancy between current and ideal figures for both Caucasian and Asian women. It was concluded that both ethnic groups of women desire and prefer thinner body shapes for themselves and for other women. For both groups of males in this study, their ideal and body shape preference for females was figures with larger hips and buttocks, more similar to the Hourglass and Pear shapes. It was concluded that both ethnic groups of males prefer and idealize slightly larger body shapes than the women in the study did.

In another study, Cohn and Adler (1992), hypothesized that women overestimate male preferences for thin female figures. For this study researchers designed a study to explore whether

women also overestimate the desirability of thin figures among female peers. The study was conducted by using body silhouettes. In the study, 87 college women and 118 college men indicated the size of their own body figure, their ideal figure, the figure most attractive to other-sex peers, and the figure most attractive to same-sex peers. As predicted by the researchers, the female silhouette that women selected as most attractive to same-sex peers was significantly thinner than the silhouette that women actually selected as most desirable. The study also found that college men misjudged the body preference of same-sex peers, exaggerating the extent to which other men perceived large physiques as ideal and desirable.

In another study (Tantleff-Dunn, 2001), researchers chose to investigate the differences in ideals and stereotypes associated with breast and chest size. The researchers of the study chose to focus on chest size because of the increasing popularity of breast implants in the 1990s. During the 1990s many celebrities such as Playboy model and actress Pamela Anderson and model and singer Carmen Electra rose to fame and were considered to evoke the ideal female breast and chest size. In the study, college campus students were questioned about their ideal female breast size. Five cohorts of primarily Caucasian participants between 1990 and 1998 completed the Breast/Chest Rating Scale. Men's ideal breast size was consistently smaller than the breast size women prefer, and men also preferred a significantly smaller chest size. The study concluded that the chest size that women think that men prefer is slightly larger than what men actually admitted to preferring.

However, some studies have uncovered that men actually prefer Hourglass figures above all other possible female body shapes. In 1990 a study examined the somatic preferences of males and females for detailed anatomical drawings of female stimulus figures to examine participants' ability to predict the preferences for members of the opposite sex (Furnham, Hester, and Weir, 1990). The figures were systematically varied on three dimensions (bust, waist, and hips), with three sizes of each (small, medium, and large).

The 12 figures were rated by 100 male and female subjects on a 7-point bipolar construct scale, ranging from extremely attractive to extremely unattractive. This was done both for the subjects' personal perceptions and for their predicted ratings of the opposite sex. Multivariate and univariate analyses yielded several sex, rating-perceptive (self vs. other), and figure shape differences and interactions. Male subjects displayed a preference for large busts and hourglass shapes, which was accurately predicted by the females. Males predicted that females would rate slimmer figures highly, and females predicted that males would rate larger figures highly.

The Hour of the Women: A Timeless Obsession



Figure 4. *The Hourglass Figure* (2009)

Because a gender difference exists for preferred female body types, special attention has been paid specifically to the Hourglass (Figure 4). According to numerous studies conducted by Gitter, Lomranz, and Saxe (1983), the Hourglass is the most preferred female body shape. It has already been established that Hourglass shapes are the least common type of female shape, yet the Hourglass figure is still desired, preferred, and heavily pursued by society. Many psychologists, biologists, and sociologists have attempted to

answers the question of why the Hourglass figure is preferred above all other possible female body shapes.

From a sociologist perspective, a study was conducted to investigate the visual appeal and popularity of the Hourglass shape (Anderson, Crawford, Nadeau, and Lindber, 1992). It was found that the appeal is related to three biological functions of human female body fat: insulation, storage of calories, and regulation of fertility. Results of the study suggested that attitudes toward fatness in women is related cross-culturally to (1) reliability of food supply, (2) climate, (3) relative social dominance of women, (4) the value placed on women's work, and (5) the probability that the expression of adolescent sexuality will have adverse consequences on girls. It was concluded that societal and cross cultural fascination with the Hourglass figure stems from the notion that women whom embody the Hourglass figure hold power in society and are iconic for reproducing.

From another sociological perspective, it is theorized that in most societies women are only considered attractive if they can find a mate (Tovee, Maisey, Emery, and Cornelissen, 1999). To gain the attention of a male, women look to curvaceous women such as Marilyn Monroe and Mae West as models. Both of these women successfully and notoriously attracted numerous males. In the article, the obsession with gathering male attention was examined; the article claimed that women feel that in order to find a mate, they too must have a curvaceous figure. The article argues that it is not necessarily women who prefer the Hourglass shape, but nonetheless they feel that men prefer it so they actively pursue the figure through plastic surgery, dieting, and other means of shape alteration. The authors concluded that an Hourglass shape for women is linked to a woman's desire to attract the attention of a male. This article and sociological claim is unique in its approach by stating that women do not prefer the Hourglass figure but they assume that men do, so they actively seek it and nourish its popularity.

From a biological perspective, researchers concluded that women with Hourglass figures are

healthier and thus live longer. In a recent study, medical doctor Berit Heitmann (2005) examined how healthy and unhealthy certain types of female body types are. The doctor theorized that many women desire an Hourglass figure because it is a symbol of healthy body fat distribution. According to this study, women with hourglass figures are healthier than women with other types of body shapes because they carry most of their weight in their buttocks and chest. Women who carry most of their weight in their abdomen are more likely to experience health problems ranging from high risk of diabetes to high risk for heart disease. The study also points out that women who have an apple shape are especially at high risk for these health concerns because they carry most of their fat in their abdomen, close to their vital organs. Biologists claim that the appeal for the Hourglass shape is not always superficial, but often related to health and wellbeing.

From a psychological perspective, Hourglass figures symbolize status, power, and fertility. Singh attempted to analyze the western culture's fascination with the Hourglass figure and its appeal to women and men. He claimed that fascination with the Hourglass figure dates back to the ancient Roman Empire (Singh, 2006). The study states that in ancient times, women with larger hips were thought to be more attractive and this body type was preferred, as it was a symbol of wealth. Women of wealth could afford to eat more often; thus they were usually larger. Thinner women were thought of as servants or peasants and usually not desired as much. Singh concluded that the Hourglass figure is preferred over other body types because it activates brain centers that drive appetitive, sociality, and attention towards females that represent the highest-quality reproductive partners.

The Apple Doesn't Fall Far From the Tree: Generation Body Image Trends and Dissatisfaction

After it was discovered in numerous studies that a gendered preference for female body shape does exist, many studies began to examine where exactly these gender preferences stem from. One causation factor that many researchers

claimed was a generational factor or parental influence.

Other studies have examined gender preference for the female body shapes from a small and specific population size. In a particular study that contained a specific population, Lamb, Jackson, Cassiday, and Priest (1993) examined misperceptions of ideal body type and their relation to eating disorders, by surveying college aged men and women to find their ideal body shape, attitudes toward eating, weight, and dieting behaviors. All of this data was collected from male (sons) and female (daughters) college students and their biological parents. All groups but the sons considered their current body shape to be heavier than their ideal. Mothers and daughters believed that men of their own generation prefer much thinner women than these men actually prefer. Mothers and daughters both showed great concern about weight and eating. Although fathers resembled mothers and daughters in their perception of being overweight, they were more similar to their sons in being relatively unconcerned about weight and eating. This study concluded that both mothers and daughters had unrealistic expectations and preference for female body type. This study claims that the fascination and obsession with the Hourglass shape is universal and that population size has no significant effect on gender preference.

In another study, analyzing elementary aged children and their mothers' preference for body shape; similar results were found (Sands and Wardle, 2003). The study's original claim was that body dissatisfaction is reported in girls as young as 9 years old in Western countries. In the current study, internalization of the "thin ideal" was predicted to be a critical influence on the development of body dissatisfaction. Participants ($n = 356$), (all fourth grade aged girls) were weighed and completed measures of body dissatisfaction, awareness and internalization of the thin ideal, and peer and maternal attitudes and behavior. Body dissatisfaction was associated with a higher body mass index, although it was not restricted to overweight girls. Internalization

mediated the relationship between awareness of the sociocultural standard of appearance and body dissatisfaction. Media exposure, peer attitudes, and behavior were, in turn, related to awareness; however, maternal weight related attitudes were crucial to supporting the hypothesized sociocultural processes. Exposure to relevant print media was also assessed. The study concluded that internalization and maternal influence operates as a central component in the development of body dissatisfaction, occurring at a young age in some girls. Maternal attitudes and preference for a specific body type is often the most power predictor for future preference for specific body types, mainly the Hourglass.

Beauty Tabloid Junkie: Media's Obsession and Influence on Preference

Another causation factor identified by numerous researchers is media influence. It is agreed that the media does enforce a specific female body type and image; however, it is debated whether men and women actually prefer these supposed ideal media images. On one end of the debate, it is argued that men and women are not strongly affected by these images and have reasonably realistic expectations for female body types. This claim is supported by a study in which 234 university students were given a questionnaire examining the relation between certain behavioral characteristics and female body-build somatotypes (Spillman and Everlington, 1989). Students were shown a series of media images, mainly magazines and television advertisements. After being exposed to these advertisements, which emphasized body type and build, the students, both men and women, were then asked to evaluate which of the three traditional body types they preferred and found most desirable. The students were shown pictures of animated figures of the same and opposite sex exhibiting three main body types: mesomorph, endomorph, and ectomorph. When evaluating the animated figures, favorable characteristics were attributed to the mesomorph body type and unfavorable characteristics were associated with the endomorph type. The ectomorph, or thin body build, was associated with more positive

characteristics than the endomorphs, but not as many positive characteristics as the mesomorphs. These findings were similar for both genders. Thus researchers concluded that men and women prefer healthy body builds in men and women, and that media displaying and glamorizing unrealistic and unhealthy body types does not affect preference.

In another study aimed at investigating the body concerns of adolescent girls, similar results were uncovered about the media's influence when researching the underlying motivations for the wish to be thinner (Tiggemann, Gardiner, and Slater, 2000). Focus group methodology was employed to access participants' experience in their own language. Altogether 67 girls of Year 11 (aged approximately 16 years) took part in five groups. Audiotaped and transcribed discussions were systematically coded for themes and rated on frequency, extensiveness, intensity, specificity and level of agreement. As expected, sociocultural influences, in particular the media, were reported as exerting the strongest pressures to be thin. More importantly, however, the girls displayed an unexpected sophistication in their conceptualization of the role of both media effects and body image in the construction of their self-image. Contrary to assumptions made in quantitative research, despite clearly articulating a desire to be thinner, the girls also described how this did not necessarily mean they were dissatisfied with their bodies. The findings suggest that the girls' meta-awareness and sophisticated understanding of the media and other pressures may serve to moderate against these forces which would otherwise seem overwhelming. This supports the claim that while Americans are bombarded with images of the perfect female body every day, they are still able to maintain a healthy and realistic image of beauty and desire.

On the other end of this debate, it is argued that these unrealistic and demanding media images for ideal body type have detrimental effects on women and men and alter their preference and perception. In two different studies, McCabe and Ricciardelli (2010)

evaluated the role of parents, peers, and the media in body image and body-change strategies among adolescent boys and girls. The participants for Study 1 (423 boys and 377 girls) completed the Body Image and Body Change Inventory and the Perceived Sociocultural Influences on Body Image and Body Change Questionnaire. Body mass index and age were also included in the analysis. Regression analysis demonstrated that sociocultural influences and feedback from the participant's best male friend were important predictors for all body-change strategies among boys. For girls, sociocultural influences and feedback from the participant's best female friend and mother were important predictors for body-change strategies. The most consistent predictor of weight loss, weight gain, and strategies to increase muscles was body-image importance and media influence. In Study 2, the authors examined the influence of the same sociocultural variables, as well as negative affect and puberty on body image and body-change strategies among a second group of 199 boys and 267 girls. The results demonstrated that a broad range of sociocultural influences predicted body-change strategies for boys and girls, with negative affect also having a unique influence for boys but not for girls. The authors concluded that the media has a negative effect on the body image preference and perception in adolescent girls and boys.

In a similar study, college females' and males' perception of ideal body waist, bust, and hip size and approval for surgical body alternation methods were examined. For this study, Harrison (2005) placed groups of men and women in front of television sets and exposed them to what she calls "curvaceously thin" women. She also included a cohort group that was not exposed to such images. She then surveyed these individuals to see who preferred what type of body shape. She concluded that for women, exposure to ideal-body images on television predicted the choice of a smaller waist and hips and either a larger bust (for those who perceived themselves to be smaller-busted) or a smaller bust (for those who perceived themselves to be larger-busted). She also concluded that for both women and men,

exposure to ideal-body images on television predicted approval of women's use of surgical

Flesh Wounds: Beauty from Pain



Figure 5. Contemporary plastic surgery (2011)

Along with the causation factors from the media and parental influence, a related topic to the study of gender differences in preference is the consequences of these factors. In the early nineties many researchers began examining how far some women particularly, will go to evoke a certain preferred body image.

Evidence that the Hourglass shape is preferred over all other female body shapes lies within the popularity of plastic surgery. Women are having plastic surgeries at accelerated rates to achieve specific body types. According to Haiken, (1997), in the early stages of cosmetic surgery doctors wanted to perform surgery only for medical reasons, while patients--or consumers--wanted to alter their appearance as they saw fit, without much regard for the usual standards of medical necessity. According to a questionnaire filled out by plastic surgeons, the four most common types of plastic surgery for women are breast augmentation, butt augmentation, rib removal, and abdomenoplasty (Haiken, 1997). Breast augmentation often called "breast implants" or "boob jobs" is the augmentation of the breasts by means of fat grafting, saline, or silicone gel prosthetics, which was initially performed to women with micromastia. Buttock augmentation which is often called a "butt implant"

body-alteration methods such as liposuction and breast augmentation.

(enhancement of the buttocks using silicone implants or fat grafting ("Brazilian butt lift") and transfer from other areas of the body). Rib removal is a contouring procedure, which involves most of the floating ribs (numbers 11 and 12) and occasionally rib 10 are removed (Haiken, 1997). The rear portions of the ribs are left intact to protect against trauma to internal organs. The last is abdomenoplasty often referred to as a "Tummy tuck" involves reshaping and firming of the abdomen. All of these plastic surgeries are surgeries that enhance an Hourglass figure (Haiken, 1997). This is further evidence that assures that females prefer and idealize the hourglass figure above all other figures.

Spoiled Fruits: Flaws in Previous Research on the Flawless

Even though the subject of gender preference has been heavily researched, the methods are flawed, so the results of the studies might also be flawed. The major flaw on the subject of gender privilege and the idea of fat prejudice is that body shapes are not taken into account. A person can have a certain BMI (Body Mass Index) which makes them overweight and/ or obese; however, body fat can be distributed differently giving individuals different body shapes. These differences in body shaping- may socially lead to advantages and disadvantages. This question of body shape has never been part of the existing research. Some of the flaws of the existing studies' findings include and are not limited to racial and ethnic prejudices. In studies such as Harrison (2005), the participants were exposed to women with different female body shapes of different races. It is possible that the participants rated these subjects on racial preference rather than body shape preference. Another major flaw in the research data methods is that the participants were exposed to pencil sketch drawings rather than actual photographs of women when choosing their preference. In studies such as (Cohn and Adler, 1992), the participants were shown body silhouettes. In studies such as (Singh and Young, 1994), the participants were

shown pencil sketch drawings. Professional and personal criticism's of these methods are that for many it is hard for individuals to state an accurate preference for a human based off of a pencil sketch drawing or a silhouette (Westman and Marlowe, 1999). Westman and Marlowe also claim that Singh and Young's theories are primitively based and contemporary society is now more influenced by the media rather than reproductive and biological needs. Last but not least flaws included in studies such as (Cusumano and Thompson, 1997), the participants were exposed to photographs of subjects that they actual knew and were familiar with, thus it is possible that they selected body figures based off of like and or dislike for that individual rather than actual body shape preference.

There have not been any notable published criticisms for research conducted in the area of Fat Studies because of the minimal about of available research there is in the field; however, because there is minimal research, the existing studies are still subjective. This particular research study was conducted in hopes of creating a stronger link between the question of gender preference and idealization, and the idea of these preferences and idealization and their relations towards female fat bias and thin privilege.

METHODS

Participants

For this study there were a total of 144 participants, 49 males and 95 females. The sample was comprised of male and female undergraduate students from a western region post-secondary educational institution. The age range for the study was 18-24 years. They were of various races and ethnicities. Students were asked to provide their exact age before completing the questionnaire. If a student was under the age of 18 or over the age of 24, they were rejected from participating. For sampling procedures, the participants voluntarily signed up for the study through a participant pool of introductory 100 level courses on the university's campus. Students were informed prior to taking the survey that the questionnaire was examining gender differences

in preference, idealization, and prejudice for certain female body types. Students were also asked if they identified as heterosexual, bisexual, or homosexual.

Instrumentation

The methodology of this study was a questionnaire. All of the questionnaires were conducted through the university online software program *Qualtrics*. The commercial computer software *Pixlr* was used to manipulate the female body types.

Procedure

To prepare the questionnaire, a free domain photograph of a woman was taken from the internet. Original photograph is below (Figure 6).



Figure 6. Original Photograph of Gender Difference in Preference and Prejudice for Female Body Types (*Body Shapers Girdles for Women*, 2006, Graphic)

The face of this woman was blocked out. The woman was then morphed into the four different female body shapes using image manipulation

software, *Pixlr*. The photograph manipulations are posted below (Figures 7-10).



Figure 7. Photo Manipulation of Hourglass Shape



Figure 9. Photo Manipulation of Apple Shape



Figure 8. Photo Manipulation of Pear Shape



Figure 10. Photo Manipulation of Banana Shape

These four photographs were then placed in an anonymous online survey and used in all sections of the questionnaire.

In the questionnaire participants were asked three questions for the ideal and preference sections. First, participants shown the four manipulated photographs and asked to rank the female bodies in order of preference: 1 being the most preferred and 4 being the least preferred. The participants were informed that the definition of preference is a greater liking for one alternative over another or others.

Next, the participants were asked to predict and rank the female bodies in order of preference based on what they assume the opposite sex prefers. They were informed again that the definition for preference is a greater liking for one alternative over another or others. The ranking scale was again 1 to 4, 1 being the most and 4 being the least preferred. They were shown the exact same photographs for this section.

Next, the participants were asked to select 1 and only 1 female body type that they considered to be the ideal female body type. Ideal was defined as satisfying one's conception of what is perfect or most suitable. Again they were shown the same four photographs.

Last, to analyze body type prejudice, participants were asked to describe each body type using four adjectives for each. The participants were provided with a preselected pool of 21 positive and 21 negative adjectives. The **positive adjectives** were *beautiful, friendly, intelligent, loyal, kind, polite, caring, powerful, self confident, self disciplined, sensible, sociable, bright, elegant, lovable, talented, radiant, intriguing, victorious, rich, and zestful*. The **negative adjectives** were *aggressive, bossy, cowardly, cruel, deceitful, dishonest, greedy, insecure, impolite, grumpy, jealous, irresponsible, mean, pompous, rude, selfish, stubborn, superficial, lazy, ugly, and incompetent*. The participants were not given definitions for the words and were not told which words were considered as positive and negative.

Participants must have answered all questions in the questionnaire for responses to be incorporated in data analysis. Because of the nature of the research, it was crucial that every answer of the survey be completed. If questions were left blank or the participant did not follow response directions, their responses were deemed as invalid and discarded. Surveys where the respondents answered anything other than heterosexual for the sexual orientation were also eliminated. Participants had the option of selecting homosexual, bisexual, or heterosexual. A total of 150 responses were received, 6 were disposed of due to inconsistencies in their responses, leaving the total of participants at 144.

Variables and Controls

The independent variable was the gender and the dependent variable was the individual's preference. The control was the woman in the photograph. The participants were shown the same woman for every question; only the body shape was manipulated to different body types. The person was also faceless to control for facial bias.

Hypotheses

Based on previous research, the general claim is that there is a gender preference and idealization for the female body types. The study extends the general claim to examine gender differences in words associated with each body type, which may lead to differences in shape bias and prejudice patterns. There are four different research questions in this study, and each research question will generate two different findings; therefore, there are eight individual different hypotheses. The research questions and hypothesis are stated as follows:

1. For the question regarding individual's preference

H₁: It is hypothesized that males will mostly prefer the Banana and least prefer the Pear.

H₂: It is hypothesized that females will most prefer the Hourglass and least prefer the Apple.

See Table 1 for graphical representation of the hypotheses.

2. For the question regarding prediction of the opposite sexes preference

H₃: It is hypothesized that males will assume that females most prefer the Banana and least prefer the Apple.

H₄: It is hypothesized that females will assume that males most prefer the Hourglass and least prefer the Banana.

See Table 2 for graphical representation of the hypotheses.

3. For the question regarding individual's idealization.

H₅: It is hypothesized that males will find the Banana ideal.

H₆: It is hypothesized that females will find the Hourglass ideal

1. For the question regarding positive and negative adjective association.

H₇: It is hypothesized that males will associate more positive adjectives with the Banana and Apple and associate more negative adjectives with Hourglass and Pear.

H₈: It is hypothesized that females will associate more positive adjectives with the Hourglass and Banana and more negative adjectives with the Pear and Apple.

See Table 3 for graphical representation of the hypotheses.

Table 1

Male and Female Preference Hypotheses

Gender	Most Preferred	Least Preferred
Male	Banana	Pear
Female	Hourglass	Apple

Table 2

Male and Female Assumed Opposite Sexes Preference Hypotheses

Gender	Most Preferred	Least Preferred
Male	Banana	Apple
Female	Hourglass	Banana

Table 3

Male and Female Positive and Negative Adjective Association Hypotheses

Gender	More Positive Adjective Association	More Negative Adjective Association
Male	Banana and Apple	Pear and Hourglass
Female	Banana and Hourglass	Pear and Apple

These hypotheses are based off of previous studies conducted on the subject that men tend to have a preference for more common types of female body shapes whereas women have a preference for rarer types of female body shapes. The hypothesis for prejudice of specific body types is based off of the researcher's personal observations that women who possess the body type of a Banana and Apple are valued and treated

better than women who possess the body type of a Pear or Apple.

Data Analysis

Because there were four different sets of questions and each was testing for a different finding, the data analysis was different for each. For the questions regarding individual preference and assumed opposite sexes preference, a 2 factor

data analysis was conducted. The mean for each of the four possible body shapes was first compared and then the mean for each body shape of the female's ratings was compared against the mean for males rating. An ANOVA test was used to distinguish preference. A Variant follow up Tukey Test was conducted to analyze the multiple comparisons.

For the question regarding individual's selection of ideal female body, number non-parametric data analysis was conducted. The frequencies of each body type that was selected as ideal was compared using a Chi-Square hypothesis test in order to run mean variance against the variance of the population.

For the question regarding adjective association, each word was coded. The participants did not know if the word that they selected was a positive or negative adjective - prior to selecting. First each word was manually sorted into negative and positive categories. Then the positive words were counted up and subtract from the negative words. The quantitative values were recorded as positive and negative variables (i.e.) if a person selected 2 positive adjectives and 2 negative adjectives for a specific body type it read as +2, if a person selected all negative words for a body type it read as -4. The mean was factored in a 2 factor analysis test using the positive and negative scale. A Repeated Measures ANOVA test was conducted to test the mean

variants against each other for each body type, then again to test against genders. Last a standard deviation test was run to test a margin of error for the means of each variable.

RESULTS

Individual Preference

Results show that most females most preferred the Hourglass, Pear, and Apple shapes and least preferred the Banana Shape. It should be noted that the rankings for the Apple and Pear shape were almost identical with 2.53 for the Apple and 2.58 for the Pear.

Results show that most males most preferred the Hourglass and Apple shapes and least preferred the Pear and Banana shapes.

Results show that over all the majority of the total population most preferred the Hourglass and Apple shapes and least preferred Pear and Banana shapes.

See Table 4 for data and illustration. Table 4 represents the difference in means and standard deviation between what the females, males, and the total population rated on the question of individual preference. As participants were instructed to select in order of 1 as most preferred to 4 as least preferred, the lower the mean, the higher the preference rating and the higher the mean, the lower the preference rating.

Table 4 (continued on next page)
Individuals Order of Preference

	Hourglass	Apple	Pear	Banana
Female	M=2.20	M=2.53	M=2.58	M=2.70
(N=95)	SD=1.13	SD=1.12	SD=1.13	SD=1.06
Male	M=2.07	M=2.35	M=2.67	M=2.91
(N=49)	SD=1.02	SD=0.97	SD=1.19	SD=1.13
Total Population	M=2.15	M=2.46	M=2.61	M=2.77
(N=144)	SD=1.09	SD=1.07	SD=1.15	SD=1.09

Individual Predictor of Opposite Sex's Preference

Results show that most females assume that the opposite sex most prefers the Hourglass and least prefers the Apple.

Results show that more males assume that the opposite sex most prefers the Banana and least prefers the Pear. It can be noted that males rated the Hourglass and Apple as almost identical in terms of ranking for the opposite sex's preference with 2.53 for the Hourglass and 2.56 for the Apple shape.

Results show that the majority of the total population assumes that the opposite sex most

prefers the Banana and Hourglass shapes, and that the opposite sex least prefer the Apple and Pear shapes.

See Table 5 for illustration. Table 5 represents the difference in means and standard deviation between what the females, males, and the total population rated as a prediction of what the opposite sex preferred. As participants were instructed to select in order of 1 as a prediction of most preferred to 4 as a prediction of least preferred, the lower the mean, the higher the preference rating and the higher the mean, the lower the preference rating.

Table 5
Individuals Prediction of Opposite Sexes Preference

	Hourglass	Apple	Pear	Banana
Female	M=2.19	M=2.84	M=2.73	M=2.24
(N=95)	SD=1.04	SD=1.01	SD=1.12	SD=1.68
Male	M=2.53	M=2.56	M=3.22	M=1.69
(N=44)	SD=1.08	SD=1.03	SD=0.88	SD=0.95
Total Population	M=2.31	M=2.75	M=2.90	M=2.05
(N=144)	SD=1.06	SD=1.02	SD=1.06	SD=1.13

Individuals Selection of Ideal Body Shape

Results show that more females and males rated the Hourglass shape as ideal. See Table 6 for illustration.

Table 7 is a frequency table that shows the four most commonly used adjectives that females associated with each body type. The table also shows the percentage of times that each word was used for a specific body type.

Table 8 is a frequency table that shows the four most commonly used adjectives that males associated with each body type. The table also shows the percentage of times that each word was used for a specific body type.

Table 9 is a frequency table that shows the four most commonly used adjectives that the total population associated with each body type. The table also shows the percentage of times that each word was used for a specific body type.

Table 6
Individuals Selection of Which Body Shapes Are Ideal

F=Frequency	Male (N=49)	Female (N=95)
Hourglass	F=19 (36.6%)	F=45 (46.9%)
Apple	F=11 (22.9%)	F=19 (19.8%)
Pear	F=10 (20.8%)	F=15 (15.6%)
Banana	F=9 (15.6%)	F=16 (16.7%)
Total	F=49 (100.0%)	F=95 (99.0%)

Table 7
Females Most Frequently Used Adjectives

Words most commonly used to describe each body type	Word and Percentage of Usage	Word and Percentage of Usage	Word and Percentage of Usage	Word and Percentage of Usage
Hourglass	Beautiful 25%	Intelligent 19%	Sensible 12%	Elegant 12%
Apple	Bossy 26%	Stubborn 13%	Social 11%	Lovable 10%
Pear	Kind 24%	Caring 19%	Happy 14%	Insecure 13%
Banana	Mean 23%	Superficial 16%	Powerful 15%	Impolite 9%

Table 8
Males Most Frequently Used Adjectives

Words most commonly used to describe each body type	Word and Percentage of Usage	Word and Percentage of Usage	Word and Percentage of Usage	Word and Percentage of Usage
Hourglass	Beautiful 26%	Self-Confident 19%	Radiant 13%	Friendly 7%
Apple	Superficial 21%	Self-Disciplined 16%	Zestful 12%	Kind 9%
Pear	Pompous 20%	Intriguing 16%	Lazy 10%	Bright 8%
Banana	Stubborn 21%	Mean 18%	Rich 15%	Cruel 13%

Table 9
Total Population's Most Frequently Used Adjectives

Words most commonly used to describe each body type	Word and Percentage of Usage	Word and Percentage of Usage	Word and Percentage of Usage	Word and Percentage of Usage
Hourglass	Beautiful 51%	Intelligent 17%	Elegant 13%	Friendly 8%
Apple	Self-Disciplined 25%	Zestful 21%	Stubborn 21%	Arrogant 17%
Pear	Caring 24%	Intriguing 17%	Insecure 15%	Lazy 12%
Banana	Mean 41%	Powerful 20%	Superficial 18%	Bossy 10%

Individuals Negative and Positive Adjective Association for Each Body Shape

Results show that females attributed (more positive) and (fewer negative) adjectives to the Hourglass and Pear shapes. Results show that females attributed (more negative) and (fewer positive) adjectives to the Apple and Banana shapes. Results show that more males attributed (more positive) and (fewer negative) adjectives to the Hourglass and Apple shapes. Results show that more males attributed (more negative) and (fewer positive) adjectives to the Pear and Banana shapes.

Results show that the total population of males and females associated (more positive) and (fewer

negative) adjectives to the Hourglass and Pear. Results show that the total population of males and females associated (more negative) and (fewer positive) adjectives to the Apple and Banana (Table 10). Table 10 displays the standard deviation and difference in means between the number of positive and negative adjectives that females, males, and the total population attributed to each body type. The higher that the statistical mean is, the more positive and fewer negative adjectives were associated with the body type. The lower the statistical mean is, the more negative and fewer positive adjectives were associated with the body shape.

Table 10
Weighted Individual Negative and Positive Adjective Association

	Hourglass	Apple	Pear	Banana
Female (N=95)	M=3.19 SD=1.30	M=1.49 SD=2.72	M=2.52 SD=2.19	M=1.02 SD=2.88
Male (N=49)	M=2.90 SD=1.92	M=1.84 SD=2.91	M=1.37 SD=2.70	M=0.53 SD=2.82
Total Population (N=144)	M=3.09 SD=1.54	M=1.61 SD=2.78	M=2.13 SD=2.43	M=0.85 SD=2.86

DISCUSSION

Individual Preference

Results from this study supported the hypothesis that women most prefer the Hourglass

and rejected the hypothesis that women least prefer the Apple. Results from this study rejected the hypothesis that men would most prefer the Banana and supported the hypothesis that men would least prefer the Pear.

In terms of individual preference, this study supports the literature that was published by Gitter, Lomranz, and Saxe (1983) that claims that the Hourglass is the most preferred and idealized female body shape for both genders. Even though there are similar patterns within the gender preferences, there are also apparent differences; therefore, this study also supports the notion that there are gender differences within preference and idealization for the female body type. Because of the nature of the study, it was difficult to attribute the differences in preference and idealization to specific biological, sociological, or psychological causes, as some of the previous literature has done; however, this study concludes that differences are small but present. The study concludes that males prefer and idealize the Hourglass as well which supports the claims by Singh and Young (1994) and the claims by Furnham, Hester, and Weir (1990). These studies are roughly two decades old, and numerous criticisms of their findings have been made, such as criticisms by Westman and Marlowe (1999), which argue that their theories are primitively based and the contemporary society no longer values these ideas. However, the results from this study conclude that their theories hold true. However, Singh and Young also theorized that the Pear shape is one of the most preferred and idealized female body shapes for males as well, and according to this study, the Pear was rated as one of the least preferred and idealized for males.

Individual Predictor of Opposite Sex's Preference

The results from this study support the hypothesis that more women assume that the opposite sex most prefers the Hourglass and went against the hypothesis that more women assume that the opposite sex least prefers the Banana. Results from this study also support the hypothesis that more males assume that the opposite sex most prefers the Banana and went against the hypothesis that more males assume that the opposite sex least prefers the Apple.

Results from this study indicate that there are gender differences that lie within individuals

prediction of the opposite sexes preference as well. This study supports the claims made by Cohn and Adler (1992), who argue that women often overestimate men's preference for the female body shape. According to this study, females rated the Banana shape as one of the most preferred for males, when in reality the Banana was one of the least preferred for the males. This was one of the similarities between the two genders as the males also thought that females would most prefer the Banana shape; however, it was the females least preferred shape as well.

Individuals Section of Ideal Body Shape

This study supports the hypothesis that women will find the Hourglass ideal. This study rejects the hypothesis that more males will rate the Banana as ideal. Because both genders found the Hourglass shape to be ideal, results from this study support previous general claims made by Gitter, Lomranz, and Saxe (1983), Anderson, Crawford, Nadeau, and Lindber (1992), Tovee, Maisey, Emery, and Cornelissen (1999), Heitmann (2005), and Singh (2006).

Individuals Negative and Positive Adjective Attribution for Each Body Shape

For females, results from this study support the hypothesis that more females will associate (more positive) and (fewer negative) adjectives to the Hourglass shape. These results support the hypothesis that females will associate (more negative) and (fewer positive) adjectives with Apple and Pear shapes. These results reject the hypothesis that females will associate (more positive) and (fewer negative) adjectives with the Banana shape.

For males, results support the hypothesis that males will associate (more positive) and (fewer negative) adjectives to the Apple shape. These results from this study also support the hypothesis that males will associate (more negative) and (fewer positive) adjectives with Pear. The results from this study reject the hypothesis that males will associate (more positive) and (fewer negative) adjectives with the Banana shape. The results from this study also reject the hypothesis

that males will associate (more negative) and (fewer positive) adjectives to the Hourglass.

The results from the study both supported and went against claims made by Spillman and Everlington (1989) for both genders. In their study they concluded that both men and women would associate more positive attributes with the mesomorph body build, which is most similar to the Hourglass shape in females. Results show that both genders did in fact associate the most positive adjectives with the Hourglass or mesomorph shape. Also in the Spillman and Everlington study, it was concluded that males and females would associate the most negative attributes with Endomorphs which is most similar to Apple and Pear shaped women. Results show that females in fact attributed more negative attributes with the Apple and the males attributed more negative adjectives to the Pear shape, supporting Spillman and Everlington's claims. However, Spillman and Everlington claimed that both men and women would attribute more positive attributes to the Ectomorph, which is similar to the Banana. The study claims that more positive attributes would be attributed to the Ectomorph than the Endomorph but not as many positive attributes as were attributed to the Mesomorph. In this study both genders associated the most negative adjectives with the Ectomorph or Banana shape.

Significant Findings

Significant findings for this study were in the adjective association. The adjective association was added in the questionnaire to examine whether body shape preference can lead to negative and positive association, which is a precursor for prejudice. Even though the face of the woman in the target photograph was blocked out in the study, both genders were consistent with strongly associating the Hourglass with the descriptive adjective "beautiful". Furthermore, both males and females attributed positive qualities to the Hourglass; as females described the woman with the Hourglass figure as "intelligent" and men described the figure as "self-confident". More females assumed that the

Hourglass shape was advantaged as the Hourglass shape had a high rating of "intelligent" and the males thought that the Hourglass shape was emotionally advantaged and had a high rating of "self-confidence." There were gender differences between the number of positive and negative adjectives associated with the Apple and Pear; however, both males and females strongly associated "stubborn" with the Apple and "lazy" and "insecure" with the Pear shape. Particularly interesting findings were with the adjectives associated to the Banana shape. While the females strongly associated "mean" and the males strongly associated "superficial" with the Banana shape, both genders strongly associated the positive attribute "powerful" with the Banana shape. This study concludes that while negative adjectives and attributes were strongly associated with the Banana, both genders still associated the cultural advantage of "power" with the shape.

This study sought to confirm that there were in fact gender differences that lie within individual preference, prediction of opposite sex's preference, and idealization. This study also sought to uncover if, in terms of fat prejudice and thin privilege, the social denominator was actually a body shape prejudice rather than previous claims of a more straight forward prejudice towards overweight individuals. Results from this study have indicated that there appears to be a body shape prejudice. It is theorized that the body shape prejudice found in this study, represents the beginning of the cycle of discrimination. It is predicted that the next behavior in the sequence is discrimination of specific female body shapes as identified in the Crandall (1994) study.

CONCLUSION

This study achieved its goals of allowing individuals to demonstrate preference, idealization, and prejudice towards the different four main female body shapes. Results were fairly consistent with hypotheses and literature on the subject of gender differences in body shape preference, prejudice, and discrimination still; there were a few limitations to this study. First, the population proved to be a limitation. The

study included more female participants and responses than males; this disparity may be because the study was conducted at a university where the ratio for men to women is 2:3.

Second, this study was only able to incorporate the four standard and average representations of female Hourglass, Apple, Pear, and Banana shape. In actuality, not all Apple, Banana, Hourglass, or Pear shapes are identical—some are more or less exaggerated than others in terms of fat and muscle distribution. In addition, the target photograph that was used was of a woman who was visibly Caucasian, blonde, and had a low to average Body Mass Index. It would prove to be beneficial to add in a wider variety of different female body shape extremes, more racially diverse targets, and targets with higher Body Mass Index's to generate more significant claims in the future.

Third, the morphing software that was used proved to be a limitation. The photos for the study were manipulated by hand, which makes it difficult to make identical and symmetrical dimensions for each body shape. In the future it might be beneficial to use photo manipulating in software that allows the user to adjust the body shape according to mathematical dimensions and portions. Although this study still advances methodology from pencil sketches that were previously used.

In the future, I am interested in further analyzing the prejudice and discrimination aspects of the research findings and analyzing specifically how these preferences and prejudice patterns hold true in various social situations. Previous studies have theorized that weight prejudice functions much like symbolic racism. Just as race has been correlated to the treatment of individual in certain scenarios such as law enforcements treatment of offenders, court room conviction and sentencing, employment opportunities, retail responses, and treatment in professional and academic settings, I have reason to believe that body shape would play a role in these scenarios as well. More research conducted on female body shape prejudice would be useful in analyzing prejudices that exist beyond

the identified scope of racism, sexism, classism, and ageism against women in present day society.

Additional goals for future research include expanding the demographics of the participant pool. The study should be run cross-culturally, racially, and ethically to get a better consensus of the scope of the problem. Like any cultural phenomena, in order to understand the depth of the problem, the foundation and the causes should be examined. More extensive research should be conducted on the biological, psychological, sociological, psychosocial, and anthropological causes for the preferences and prejudices towards certain female body shapes.

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